

## Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

## Listing of Claims:

1 (currently amended). A ferroelectric material, comprising:

a perovskite alloy comprising stacked planes of the form  $(A'A''A'''\dots)(B'_{x'(k)}B''_{x''(k)}B'''_{x'''(k)}\dots)X_3$ , wherein  $A', A'', A''', \dots, B', B'', B''', \dots$ , and  $X_3$  represent atomic species, wherein said stacked planes comprise at least one A site atomic species and at least two B site atomic species, wherein said at least two of  $B', B'', B''', \dots$  B site atomic species belong to different columns of the periodic table and wherein  $x'(k), x''(k), x'''(k), \dots$  said at least two B site atomic species are modulated in parameters yielding the relative concentration of the  $B', B'', B''', \dots$  atoms, respectively, in each said stacked plane,  $k$ , of said alloy;

wherein said alloy is atomically ordered along a direction that is not the direction of polarization of the disordered alloy;

wherein said planes are stacked with a short stacking period; and

wherein said modulated parameters  $x'(k), x''(k), x'''(k), \dots$  are selected relative concentration of said at least two B site atomic species is modulated to obtain at a specific temperature dielectric and piezoelectric properties of said alloy that are substantially enhanced over the dielectric and piezoelectric properties of the disordered

alloy, said specific temperature being selected from any temperature less than the Curie temperature of the disordered alloy.

2 (original). The ferroelectric material of claim 1, wherein said stacking period is a four-plane period.

3 (currently amended). The ferroelectric material of claim 1, wherein said A' atom is A site atomic species consists of lead, with no other A site atoms.

4 (currently amended). The ferroelectric material of claim 1, wherein said B' atom is B site atomic species comprises Scandium.

5 (currently amended). The ferroelectric material of claim 1, wherein said B'' atom is B site atomic species comprises Niobium.

6 (currently amended). The ferroelectric material of claim 1 ~~having no B site alloying elements other than~~ wherein said B site atomic species consists of Scandium and Niobium.

7 (currently amended). The ferroelectric material of claim 1, ~~where said X atom is~~ further comprising oxygen.

8 (original). The ferroelectric material of claim 1, wherein said direction along which said alloy is atomically ordered is along the [001] direction.

9 (currently amended). A ferroelectric material, comprising:  
a perovskite alloy comprising stacked planes ~~of the form  $(A'_{x'(k)}A''_{x''(k)}A'''_{x'''(k)})$~~   $(A'B'B''B''')X_3$ , wherein  $A', A'', A''', \dots, B', B'', B''', \dots$ , and  $X_3$  represent atomic species, wherein said stacked planes comprise at least two A site atomic species and at least one B site atomic species, wherein said at least two of  $A', A'', A''', \dots$  A site atomic species belong to different columns of the periodic table and wherein  $x'(k), x''(k),$

~~$x'''(k), \dots$ , said at least two A site atomic species are modulated in parameters yielding the relative concentration of the  $A', A'', A'''$ , ... atoms, respectively, in each said stacked plane,  $k$ , of said alloy;~~

wherein said alloy is atomically ordered along a direction that is not the direction of polarization of the disordered alloy;

wherein said planes are stacked with a short stacking period; and

wherein said ~~modulated parameters  $x'(k), x''(k), x'''(k), \dots$  are selected~~ relative concentration of said at least two A site atomic species is modulated to obtain at a specific temperature dielectric and piezoelectric properties of said alloy that are substantially enhanced over the dielectric and piezoelectric properties of the disordered alloy, said specific temperature being selected from any temperature less than the Curie temperature of the disordered alloy:

10 (original). The ferroelectric material of claim 9, wherein said stacking period is a four-plane period.

11 (currently amended). The ferroelectric material of claim 9, ~~where said X atom is~~ further comprising oxygen.